

We claim:

1. A covered organic waste storage lagoon comprising:

an organic slurry basin bordered by an elongate berm along a first side of the basin and containing a quantity of organic slurry;

a cover fabricated of a plurality of cover sections of geotextile fabric laid out along the first side of the organic slurry basin in fanfold relationship parallel to the berm with adjacent edges of the panels interconnected on site at the basin, the cover having a leading edge on a last of said sections for moving across the basin in deployment of the cover over the lagoon;

a floatation device connected to the leading edge of the cover in order to pull the cover over the surface of organic slurry material located in the basin upon deployment of the cover;

a plurality of deployment lines connected at one end to the leading edge and extendable across the lagoon basin to a second side opposite the berm;

a mandrel assembly for temporary installation along a second side of the basin opposite the first side so that the deployment lines can be wound around the mandrel to pull the cover across the basin; and

tether lines securable to edges of the cover for connecting the cover to anchors installed along the perimeter of the lagoon basin.

2. The organic waste storage lagoon of claim 1 wherein:

the geotextile fabric has a grab tensile strength of at least 200 pounds.

3. The organic waste storage lagoon of Claim 1 wherein:

the geotextile fabric has an apparent size opening equal to a 100 U.S. sieve.

4. The organic waste storage lagoon of Claim 1 wherein:
the geotextile fabric has a permittivity of 1.5/gal./min./ft²/sec. or less.
5. The organic waste storage lagoon of Claim 1 wherein:
said cover includes a plurality of strata including a first layer disposed on top of
when the cover is covering a lagoon basin and comprised as a sacrificial layer of material
exposed to the ultraviolet rays of the sun;
second and third layers interconnected with the first layer and located beneath the
first layer;
one of said second and third layers being a layer of geotextile fabric; and
the other of said second and third layers being a floatation foam layer.
6. The organic waste storage lagoon of Claim 5 wherein:
the foam layer is comprised of a plurality of parallel spaced apart foam strips.
7. The organic waste storage lagoon of Claim 6 wherein:
said foam is a closed cell foam.
8. The organic waste storage lagoon of Claim 5 wherein:
the foam layer is disposed between the first layer and the geotextile fabric layer.
9. The organic waste storage lagoon of Claim 8 wherein:
said foam layer is comprised of a plurality of parallel spaced apart foam strips.
10. The organic waste storage lagoon of Claim 8 wherein:
the first layer is also formed of geotextile fabric.
11. A cover system for installation to cover an organic slurry basin bordered by an
elongate berm along a first side thereof, comprising:

a cover fabricated of a plurality of cover sections of geotextile fabric laid out along a first side of an organic slurry basin in fanfold relationship parallel to the berm and next to the lagoon with adjacent edges of the panels interconnected on site at the basin, the cover having a leading edge on the last of said sections for moving across the basin in deployment of the cover over the lagoon;

a floatation device connected to the leading edge of the cover in order to pull the cover over the surface of organic slurry material located in the basin upon deployment of the cover;

a plurality of deployment lines connected at one end to the leading edge and extendable across the lagoon basin to the side opposite the berm;

a mandrel assembly for temporary installation along a second side of the basin opposite the first side so that the deployment lines can be wound around the mandrel to pull the cover across the basin; and

tether lines secured to edges of the cover for connecting the cover to anchors installed along the perimeter of the lagoon basin.

12. The cover system of claim 11 wherein:

the geotextile fabric has a grab tensile strength of at least 200 pounds.

13. The cover system of Claim 11 wherein:

the geotextile fabric has an apparent size opening equal to a 100 U.S. sieve.

14. The cover system of Claim 11 wherein:

the geotextile fabric has a permittivity of 1.5/gal./min./ft²/sec. or less.

15. The cover assembly of Claim 11 wherein:

said cover includes a plurality of strata including a first layer disposed on top of the cover when the cover is covering a lagoon basin and comprised as a sacrificial layer of material exposed to the ultraviolet rays of the sun;

second and third layers interconnected with the first layer and located beneath the first layer;

one of said second and third layers being a layer of geotextile fabric; and
the other of said second and third layers being a floatation foam layer.

16. The cover assembly of Claim 15 wherein:

the foam layer is comprised of a plurality of parallel spaced apart foam strips.

17. The cover assembly of Claim 16 wherein:

said foam is a closed cell foam.

18. The cover assembly of Claim 15 wherein:

the foam layer is disposed between the first layer and the geotextile fabric layer.

19. The cover assembly of Claim 18 wherein:

said foam layer is comprised of a plurality of parallel spaced apart foam strips.

20. The cover assembly of Claim 18 wherein:

the first layer is also formed of geotextile material.

21. A method of covering an organic waste storage lagoon basin containing a quantity of organic waste and having an elongate berm along a first side of the basin, comprising:

providing a plurality of panels of geotextile fabric in sufficient number to span the width of the basin to be covered;

successively laying out along the first edge of the basin parallel to the berm said panels of geotextile fabric in fanfold fashion;

overlapping edges of adjacent panels as they are laid out and fastening the adjacent panel edges together;

attaching a flotation device to the last edge of the top panel and attaching deployment lines to the flotation device;

extending the deployment lines to the opposite side of the basin;

providing a mandrel on the opposite side of the basin and winding the deployment lines on the mandrel to pull the cover across the basin as the flotation device floats on the surface of the organic waste located in the basin;

using tether lines to tether the cover in place at a plurality of tether points such that the cover floats atop the lagoon basin to substantially cover the lagoon basin.

22. A method of covering an organic waste storage lagoon basin containing a quantity of organic waste and having an elongate berm along a first side of the basin, comprising:

providing a plurality of panels of interconnected multiple strata material including a top sacrificial layer of material, a foam layer and a geotextile fabric layer, said panels in sufficient number to span the width of the basin to be covered;

successively laying out along the first edge of the basin parallel to the berm said panels of geotextile fabric in fanfold fashion in a manner such that the sacrificial layer will remain on top when the cover is deployed over the basin;

overlapping edges of adjacent panels as they are laid out and fastening the adjacent panel edges together;

attaching a flotation device to the last edge of the top panel and attaching deployment lines to the flotation device;

extending the deployment lines to the opposite side of the basin;

providing a mandrel on the opposite side of the basin and winding the deployment lines on the mandrel to pull the cover across the basin as the flotation device floats on the surface of the organic waste located in the basin;

using tether lines to tether the cover in place at a plurality of tether points such that the cover floats atop the lagoon basin to substantially cover the lagoon basin.

23. The method of Claim 22 including:

providing said foam layer as a plurality of parallel, spaced apart strips of foam.

24. An organic waste storage lagoon basin cover comprising:

a plurality of connected panels of interconnected multiple layers;

each panel having a top sacrificial layer to shield the cover from ultraviolet light degradation;

each panel having a foam layer comprised of a plurality of parallel, spaced apart foam strips; and

each panel having a layer of geotextile fabric.

25. The cover of Claim 24 wherein:

the various layers are interconnected by needle punching.

26. The cover of Claim 24 wherein:

the foam layer is located between the sacrificial layer and the geotextile fabric layer.

27. The cover of Claim 26 wherein:

the sacrificial layer is also formed of a geotextile fabric.

28. The cover of Claim 24 wherein:

the geotextile layer is located between the sacrificial layer and the foam layer.